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“Step Out From the Old to the New”

IS 10482-4 (1986): Connectors for Printed Wiring Board, Part 4: Socket, Card Insertion, Contact Spacing 3.962 mm, Categories A and AD Types 10482 IS-03 [LITD 3: Electromechanical Components and Mechanical Structures for Electronic Equipment]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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*Indian Standard*SPECIFICATION FOR
CONNECTORS FOR PRINTED WIRING BOARDPART 4 SOCKET, CARD INSERTION, CONTACT SPACING 3.692 mm
CATEGORIES A AND AD TYPES 10482 IS-03

0. General—This standard shall be read in conjunction with IS : 10482 (Part 1)-1983 'Specification for connectors for printed wiring board : Part 1 Test schedule and requirements'.

1. Type Designation — See 4 of IS : 10482 (Part 1)-1983.

1.1 The types of connectors covered in this standard are designated as given below:

- | | | | |
|-----|-----------------------------|-----|-------------------------------|
| 1. | 10482 IS-03-06-a-2-A-5/1.27 | 35. | 10482 IS-03-28-b-2-B-5/1.27 |
| 2. | 10482 IS-03-06-a-2-B-5/1.27 | 36. | 10482 IS-03-28-b-2-C-5/1.27 |
| 3. | 10482 IS-03-06-a-2-C-5/1.27 | 37. | 10482 IS-03-36-a-2-A-5/1.27 |
| 4. | 10482 IS-03-06-b-2-A-5/1.27 | 38. | 10482 IS-03-36-a-2-B-5/1.27 |
| 5. | 10482 IS-03-06-b-2-B-5/1.27 | 39. | 10482 IS-03-36-a-2-C-5/1.27 |
| 6. | 10482 IS-03-06-b-2-C-5/1.27 | 40. | 10482 IS-03-36-b-2-A-5/1.27 |
| 7. | 10482 IS-03-10-a-2-A-5/1.27 | 41. | 10482 IS-03-36-b-2-B-5/1.27 |
| 8. | 10482 IS-03-10-a-2-B-5/1.27 | 42. | 10482 IS-03-36-b-2-C-5/1.27 |
| 9. | 10482 IS-03-10-a-2-C-5/1.27 | 43. | 10482 IS-03-43-a-2-A-5/1.27 |
| 10. | 10482 IS-03-10-b-2-A-5/1.27 | 44. | 10482 IS-03-43-a-2-B-5/1.27 |
| 11. | 10482 IS-03-10-b-2-B-5/1.27 | 45. | 10482 IS-03-43-a-2-C-5/1.27 |
| 12. | 10482 IS-03-10-b-2-C-5/1.27 | 46. | 10482 IS-03-43-b-2-A-5/1.27 |
| 13. | 10482 IS-03-15-a-2-A-5/1.27 | 47. | 10482 IS-03-43-b-2-B-5/1.27 |
| 14. | 10482 IS-03-15-a-2-B-5/1.27 | 48. | 10482 IS-03-43-b-2-C-5/1.27 |
| 15. | 10482 IS-03-15-a-2-C-5/1.27 | 49. | 10482 IS-03-06-a-2-A-2.54/0.4 |
| 16. | 10482 IS-03-15-b-2-A-5/1.27 | 50. | 10482 IS-03-06-a-2-B-2.54/0.4 |
| 17. | 10482 IS-03-15-b-2-B-5/1.27 | 51. | 10482 IS-03-06-a-2-C-2.54/0.4 |
| 18. | 10482 IS-03-15-b-2-C-5/1.27 | 52. | 10482 IS-03-06-b-2-A-2.54/0.4 |
| 19. | 10482 IS-03-18-a-2-A-5/1.27 | 53. | 10482 IS-03-06-b-2-B-2.54/0.4 |
| 20. | 10482 IS-03-18-a-2-B-5/1.27 | 54. | 10482 IS-03-06-b-2-C-2.54/0.4 |
| 21. | 10482 IS-03-18-a-2-C-5/1.27 | 55. | 10482 IS-03-10-a-2-A-2.54/0.4 |
| 22. | 10482 IS-03-18-b-2-A-5/1.27 | 56. | 10482 IS-03-10-a-2-B-2.54/0.4 |
| 23. | 10482 IS-03-18-b-2-B-5/1.27 | 57. | 10482 IS-03-10-a-2-C-2.54/0.4 |
| 24. | 10482 IS-03-18-b-2-C-5/1.27 | 58. | 10482 IS-03-10-b-2-A-2.54/0.4 |
| 25. | 10482 IS-03-22-a-2-A-5/1.27 | 59. | 10482 IS-03-10-b-2-B-2.54/0.4 |
| 26. | 10482 IS-03-22-a-2-B-5/1.27 | 60. | 10482 IS-03-10-b-2-C-2.54/0.4 |
| 27. | 10482 IS-03-22-a-2-C-5/1.27 | 61. | 10482 IS-03-15-a-2-A-2.54/0.4 |
| 28. | 10482 IS-03-22-b-2-A-5/1.27 | 62. | 10482 IS-03-15-a-2-B-2.54/0.4 |
| 29. | 10482 IS-03-22-b-2-B-5/1.27 | 63. | 10482 IS-03-15-a-2-C-2.54/0.4 |
| 30. | 10482 IS-03-22-b-2-C-5/1.27 | 64. | 10482 IS-03-15-b-2-A-2.54/0.4 |
| 31. | 10482 IS-03-28-a-2-A-5/1.27 | 65. | 10482 IS-03-1-b-2-B-2.54/0.4 |
| 32. | 10482 IS-03-28-a-2-B-5/1.27 | 66. | 10482 IS-03-15-b-2-C-2.54/0.4 |
| 33. | 10482 IS-03-28-a-2-C-5/1.27 | 67. | 10482 IS-03-18-a-2-A-2.54/0.4 |
| 34. | 10482 IS-03-28-b-2-A-5/1.27 | 68. | 10482 IS-03-18-a-2-B-2.54/0.4 |

Adopted 16 December 1986

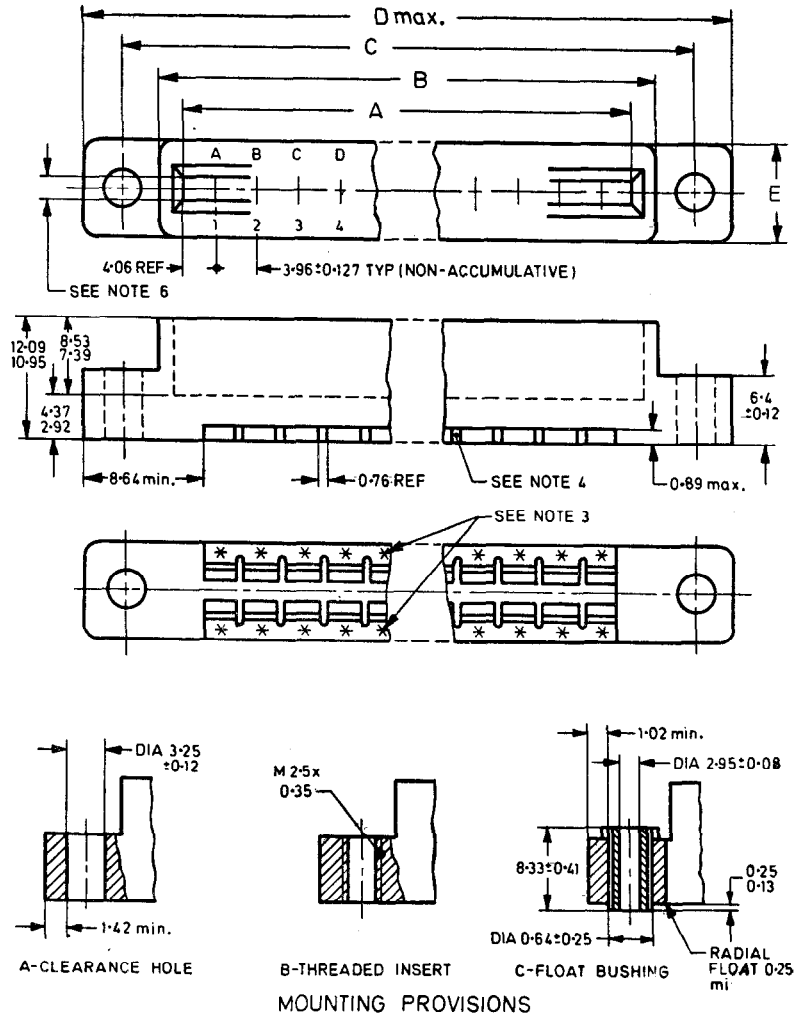
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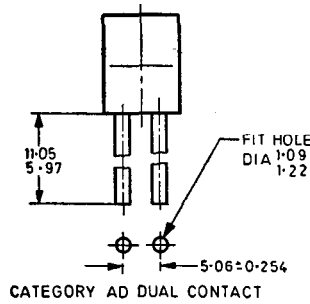
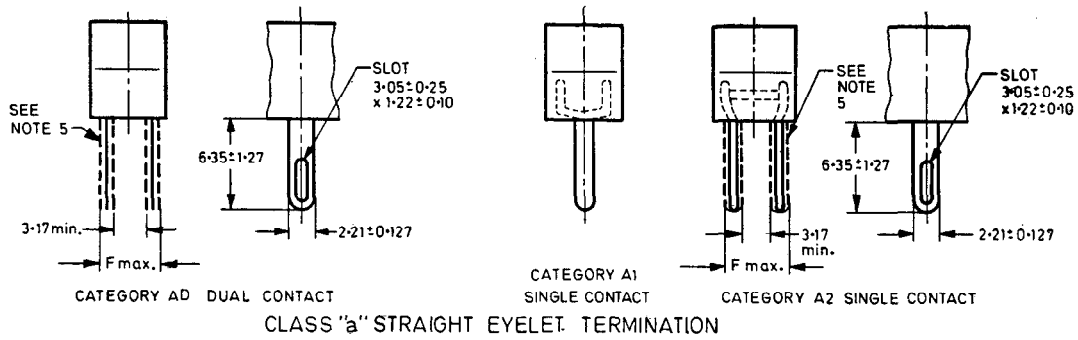
- | | | | |
|-----|-------------------------------|-----|-------------------------------|
| 69. | 10482 IS-03-18-a-2-C-2.54/0.4 | 83. | 10482 IS-03-28-b-2-B-2.54/0.4 |
| 70. | 10482 IS-03-18-b-2-A-2.54/0.4 | 84. | 10482 IS-03-28-b-2-C-2.54/0.4 |
| 71. | 10482 IS-03-18-b-2-B-2.54/0.4 | 85. | 10482 IS-03-36-a-2-A-2.54/0.4 |
| 72. | 10482 IS-03-18-b-2-C-2.54/0.4 | 86. | 10482 IS-03-36-a-2-B-2.54/0.4 |
| 73. | 10482 IS-03-22-a-2-A-2.54/0.4 | 87. | 10482 IS-03-36-a-2-C-2.54/0.4 |
| 74. | 10482 IS-03-22-a-2-B-2.54/0.4 | 88. | 10482 IS-03-36-b-2-A-2.54/0.4 |
| 75. | 10482 IS-03-22-a-2-C-2.54/0.4 | 89. | 10482 IS-03-36-b-2-B-2.54/0.4 |
| 76. | 10482 IS-03-22-b-2-A-2.54/0.4 | 90. | 10482 IS-03-36-b-2-C-2.54/0.4 |
| 77. | 10482 IS-03-22-b-2-B-2.54/0.4 | 91. | 10482 IS-03-43-a-2-A-2.54/0.4 |
| 78. | 10482 IS-03-22-b-2-C-2.54/0.4 | 92. | 10482 IS-03-43-a-2-B-2.54/0.4 |
| 79. | 10482 IS-03-28-a-2-A-2.54/0.4 | 93. | 10482 IS-03-43-a-2-C-2.54/0.4 |
| 80. | 10482 IS-03-28-a-2-B-2.54/0.4 | 94. | 10482 IS-03-43-b-2-A-2.54/0.4 |
| 81. | 10482 IS-03-28-a-2-C-2.54/0.4 | 95. | 10482 IS-03-43-b-2-B-2.54/0.4 |
| 82. | 10482 IS-03-28-b-2-A-2.54/0.4 | 96. | 10482 IS-03-43-b-2-C-2.54/0.4 |

2. Outline and Dimensions — The outline and dimensions shall be according to Fig. 1 and Table 1.



All dimensions in millimetres.

FIG. 1 OUTLINE AND DIMENSIONS — Continued



Note 1 — For dimensions see Table 1.

Note 2 — Unless otherwise specified, tolerance is 0.38 mm.

Note 3 — Contacts and terminals shall be designated in the connector using raised letters and numerals as shown in Fig. 1. The bottom designations (letters and numerals) shall correspond with the top designations in designating the same contact.

Note 4 — The shape of the barriers is optional except that the barriers shall not protrude beyond the plane of under side of the mounting flange, centre barriers shall be optional.

Note 5 — The portion of the terminal from the bottom of the terminal hole to the end of the terminal shall be within the indicated dotted line tolerance zone.

Note 6 — The slot shall accept the following thickness printed wiring board:
2 — 1.6 mm

All dimensions in millimetres.
FIG. 1 OUTLINE AND DIMENSIONS

TABLE 1 DIMENSIONS
(Clause 2)

Types of Connector	Contact Spacing	A	B	C	D Max	Thick-ness of pc Board	E	F	Tole- rance, Max
10482-IS-03-06-a/b-2-A-5/1.27 or 2.54/0.4	3.962	27.94	31.75	38.91	47.38	2	8.71	6.35	±0.25
10482-IS-03-06-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.15	±0.80	±0.20	50.80				
10482-IS-03-10-a/b-2-A-5/1.27 or 2.54/0.4	3.962	43.79	47.73	54.76	63.20				
10482-IS-03-10-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.15	±0.80	±0.20	66.80				
10482-IS-03-15-a/b-2-A-5/1.27 or 2.54/0.4	3.962	63.61	67.46	74.63	83.01				
10482-IS-03-15-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.15	±0.81	±0.20	86.51				
10482-IS-03-18-a/b-2-A-5/1.27 or 2.54/0.4	3.962	75.49	79.38	86.51	94.89				
10482-IS-03-18-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.15	±0.80	±0.20	98.43				
10482-IS-03-22-a/b-2-A-5/1.27 or 2.54/0.4	3.962	91.34	95.25	102.41	110.74				
10482-IS-03-22-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.20	±0.81	±0.20	114.30				
10482-IS-03-28-a/b-2-A-5/1.27 or 2.54/0.4	3.962	115.11	117.16	126.09	134.21				
10482-IS-03-28-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.25	±0.81	±0.41	137.77				
10482-IS-03-36-a/b-2-A-5/1.27 or 2.54/0.4	3.962	146.76	149.86	157.99	166.19	2	12.70	6.35	±0.25
10482-IS-03-36-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.25	±0.81	±0.41	170.00				
10482-IS-03-43-a/b-2-A-5/1.27 or 2.54/0.4	3.962	174.55	177.80	185.47	193.83	2	12.70	6.35	±0.25
10482-IS-03-43-a/b-2-B/C-5/1.27 or 2.54/0.4		±0.25	±0.81	±0.41	197.64				

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3. Material, Finish and Life Requirement — The material, finish and life requirement shall be as given below depending upon the use of the connectors:

	<i>Professional Grade</i>	<i>Consumer Grade</i>
a) Material	Glass filled DAP or glass filled phenolic	General purpose phenolics
b) Contacts Female	Beryllium copper or phosphor bronze	Phosphor bronze
c) Finish	1.27 μm gold over 5 μm nickel or copper	0.4 μm gold over 2.54 μm nickel or copper
d) Mechanical life	500 mating cycles	500 mating cycles

4. Climatic Category — The climatic category shall be applicable as given below depending upon the use of the connectors:

	<i>Professional Grade</i>	<i>Consumer Grade</i>
a) Temperature severity	—65°/125°C	—10°/70°C
b) Damp heat severity	56 days	21 days
c) Low air pressure	4.4 kPa	Not applicable
d) Acceleration (steady state)	500 m/s ²	Not applicable
e) Vibration	10-2 000 Hz	10-55 Hz
f) Shock	1 km/s ²	Not applicable
g) Bump	4 000 bumps at 40 g	1 000 bumps at 40 g

5. Electrical Ratings — The rated voltage shall be 600 volts ac (rms) for professional grade and 250 volts ac (rms) for consumer grade. The current shall be 5 amperes, *Max*, for both the grades.

6. Tests — See 8 of IS : 10482 (Part 1)-1983.

7. Requirements

7.1 The connector shall comply with the following requirements:

<i>Characteristics</i>	<i>Requirements</i>	
	<i>Professional Grade</i>	<i>Consumer Grade</i>
a) Dimensions	See Fig. 1 and Table 1	See Fig. 1 and Table 1
b) Insulation resistance:		
1) For zero group	5 000 M Ω <i>Min</i> at 500 V (dc)	500 M Ω <i>Min</i> at 100 V (dc)
2) For other groups	1 000 M Ω <i>Min</i> at 500 V (dc)	100 M Ω <i>Min</i> at 100 V (dc)
c) Test current for contact resistance	5 A	1 A
d) Insertion and withdrawal force	The individual contact engagement force shall not exceed 4.5 N. For test conditions, see Appendix A.	Insertion and withdrawal force shall be checked by hand only

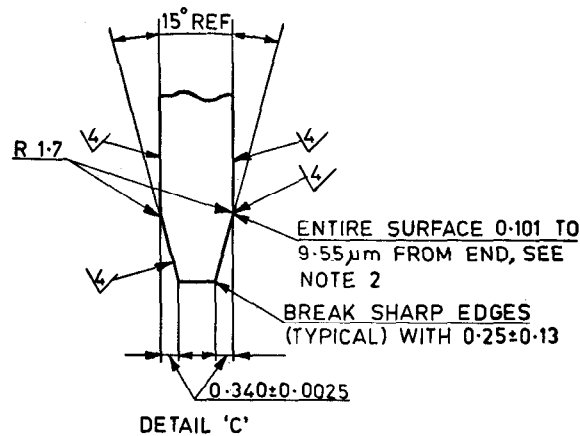
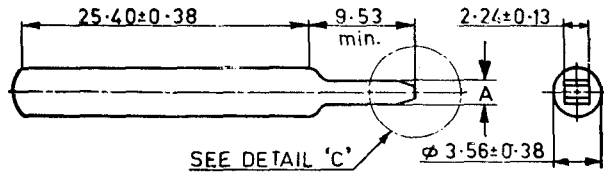
8. Marking — See 5 of IS : 10482 (Part 1)-1983.

APPENDIX A

[Clause 7.1 (d)]

INSERTION AND WITHDRAWAL FORCE

A-1. Test Conditions —Prior to making measurements, the contacts shall be conditioned by three insertions of a flat, steel gauge of maximum thickness. The dimensions of the gauge shall be as shown in Fig. 2. After above conditioning, the connector half which houses the socket contacts shall be supported and a gauge of minimum board thickness aligned with individual contacts. The force to engage and disengage shall be measured.



Gauge Type	Size	Dimension A
Insertion and withdrawal force	2	1.57
Sizing	2	1.78
Individual contact retention	2	1.37

Note 1 — Unless otherwise specified, tolerance is ± 0.13 mm.

Note 2 — Only the working surface designated 4 shall be finished.

Note 3 — Rockwell hardness, C, 50-55.

All dimensions in millimetres.

FIG. 2 INDIVIDUAL CONTACT INSERTION GAUGE (TYPES A, AD AND D)

EXPLANATORY NOTE

This standard is based on JSS 50806 (August 1971) 'Detail specification for connectors electrical printed wiring board, general purpose. The types of connectors covered in this standard are equivalent to pattern JSS 50806/03.